

## IL-1 $\alpha$ (B-7): sc-9983

### BACKGROUND

Two forms of interleukin 1, designated IL-1 $\alpha$  and IL-1 $\beta$ , have been described. Although encoded by distinct genes and exhibiting roughly only 25% sequence identity, IL-1 $\alpha$  and IL-1 $\beta$  bind to the same receptor and seem to elicit similar biological responses. IL-1 production is generally thought to be associated with inflammation, but it has also been shown to be expressed during kidney development, thymocyte differentiation and cartilage degradation. IL-1 plays a critical role in the regulation of immune response and inflammation acting as an activator of T and B lymphocytes and natural killer (NK) cells. In T cells, IL-1 stimulates the production of IL-2 and selectively inhibits IL-4 expression. IL-1 induces B cell proliferation and maturation, and immunoglobulin synthesis. NK cells require IL-1 $\beta$  for production of the anti-pathogen IFN- $\gamma$ . IL-1 has also been implicated in several pathological conditions including rheumatoid arthritis, inflammatory bowel disease and atherosclerosis.

### CHROMOSOMAL LOCATION

Genetic locus: IL1A (human) mapping to 2q13.

### SOURCE

IL-1 $\alpha$  (B-7) is a mouse monoclonal antibody raised against amino acids 113-271 representing mature IL-1 $\alpha$  of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-1 $\alpha$  (B-7) is available conjugated to agarose (sc-9983 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-9983 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-9983 PE), fluorescein (sc-9983 FITC), Alexa Fluor<sup>®</sup> 488 (sc-9983 AF488), Alexa Fluor<sup>®</sup> 546 (sc-9983 AF546), Alexa Fluor<sup>®</sup> 594 (sc-9983 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-9983 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-9983 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-9983 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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### APPLICATIONS

IL-1 $\alpha$  (B-7) is recommended for detection of IL-1 $\alpha$  of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for IL-1 $\alpha$  siRNA (h): sc-39613, IL-1 $\alpha$  shRNA Plasmid (h): sc-39613-SH and IL-1 $\alpha$  shRNA (h) Lentiviral Particles: sc-39613-V.

Molecular Weight of IL-1 $\alpha$ : 33/17 kDa.

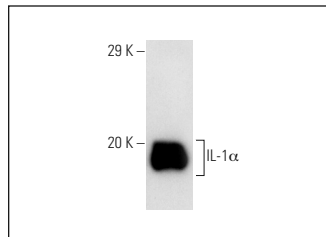
### STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

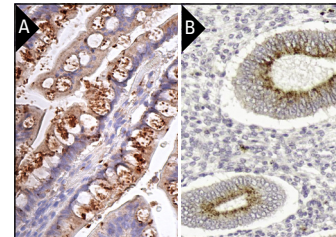
### RESEARCH USE

For research use only, not for use in diagnostic procedures.

### DATA



IL-1 $\alpha$  (B-7): sc-9983. Western blot analysis of human recombinant IL-1 $\alpha$ .



IL-1 $\alpha$  (B-7): sc-9983. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic and extracellular staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human endometrium tissue showing cytoplasmic staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

### SELECT PRODUCT CITATIONS

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### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.